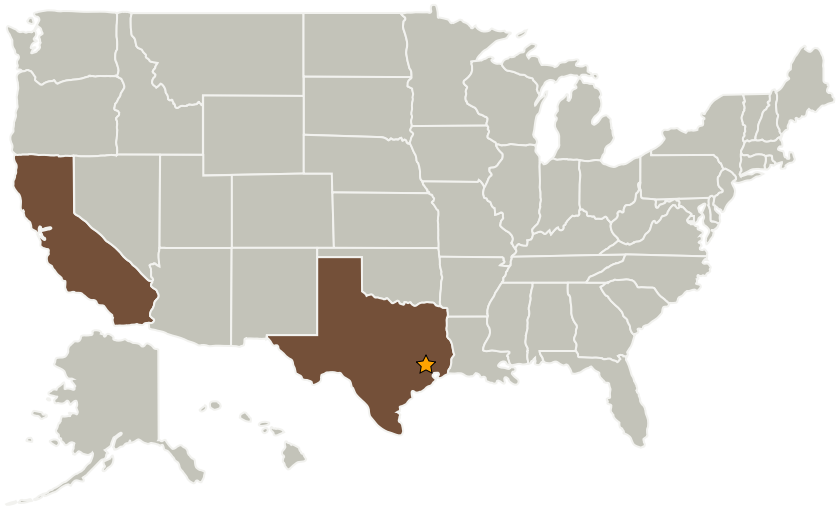
Lunar Surface Solar Electric Power System, Phase I

Completed Technology Project (2009 - 2009)

Project Introduction

We propose a concentrated photovoltaic electric power system for lunar operations called C-Lite Lunar. The novel technology produces a near-term solar array system that provides substantially improved performance in terms of high specific power (>600 W/kg BOL, 10X lighter than rigid arrays), lightweight, high deployed stiffness (5X stiffer than rigid arrays), high deployed strength, compact stowage volume (>1,000 kW/m3 BOL, 30X more compact stowage than rigid arrays), affordability, and rapid commercial readiness. The proposed effort will provide a disruptively positive performance impact to the end-user, and allow for the rapid insertion of this mission-enabling technology for future applications.

Primary U.S. Work Locations and Key Partners



Organizations Performing Work	Role	Type	Location
★Johnson Space Center(JSC)	Lead Organization	NASA Center	Houston, Texas
Deployable Space Systems, Inc(DSS)	Supporting Organization	Industry	Goleta, California

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Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Center / Facility:

Johnson Space Center (JSC)

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

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Primary U.S. Work Locations	
California	Texas

Project Management

Program Director:

Jason L Kessler

Program Manager:

Carlos Torrez

Technology Areas

Primary:

- TX03 Aerospace Power and Energy Storage
  - TX03.1 Power Generation and Energy Conversion
    - TX03.1.1 Photovoltaic